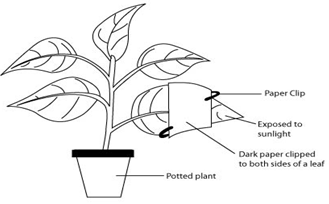
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|  | **Biology** | **شعار-القسم** |
| **Worksheet-3-** |
| Photosynthesis |

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| --- | --- |
| Name: Class: 8 /……........ | |
| Book pages:332-335 | |
| **5-3-2012** | Date: |
| 8.10.3-8.10.4 | Core Standard number |
| 1. Remind students that plants need light as well as carbon dioxide and water in order to grow well  2.To show that light is necessary for photosynthesis**.**  3. To show that chlorophyll is necessary for photosynthesis.  4. Construct the chemical equation for photosynthesis in words and symbols. | Learning Objectives  Logo + text 2 |

1. Set up the following apparatus:

A paper is Fixed the on one of the leaves( destarched leaves ) as shown in the diagram below

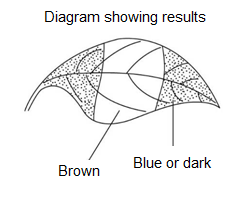


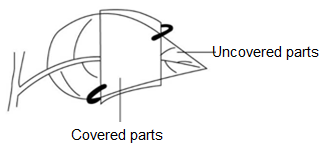
The experimental set up is exposed to sunlight for 2-6 hours. The paper is removed and the leaf is tested for starch.

Results.

The diagrams below shows the leaf before the experiment and after.

A test for starch is conducted on both the covered parts of the leaf and uncovered parts of the leaf.

The Diagram shows results: the parts that were covered are stained brown, and the rest of the leaf turns blue or black)



Use the result above to answer the following questions:

1. How does the leaf appear after the test for starch?

The covered parts of the plant appears brown and the uncovered parts appear blue or dark.

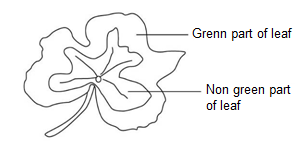
1. In which part of the leaf starch is produced? Justify your answer.

Starch is produced only in areas that received light ( uncovered parts of the leaf).

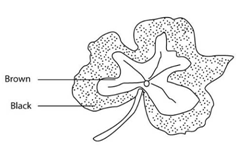
Un covered parts of the leaf show positive test for the starch.

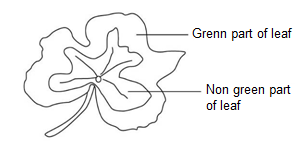
1. Is light necessary for photosynthesis? Justify our answer.

Yes, because without light no starch is formed so no photosynthesis.

1. The following picture shows a variegated plant:

The plant with variegated leaves is left in light for 2-6 hours. One leaf is removed and tested for starch.

The following pictures show a variegated leaf before and after testing for starch with iodine solution.



After the test for starch

Before the test for starch

Use the iformation above to answer the following questions:

1. Which part of the variegated leaf contains chlorophyll.

The grennpart of the leaf contains chlorophyll.

1. Where is the starch made?

Starch is made in the area of the leaf with chlorophyll.

1. Is chlorophyll necessary for photosynthesis? Justify your answer.

Yes, because in the area of the leaf without chlorophyll no starch is made, so non photosynthesis.